Valerie Gillispie. An Analysis of Online User Education Resources in Academic Archives. A Master's Paper for the M.S. in L.S. degree. November, 2005. 37 pages. Advisor: Deborah Barreau.

This study of archival online user education resources is a content analysis of a sample of Association of Research Libraries. Features specifically examined are vocabulary and terminology definition, guidance in search strategies, and understanding primary source representation (the meanings and use of finding aids). This study also examines characteristics such as rules and regulations, the accessibility of these resources, and whether archival user education resources are made available directly on parent library websites. The findings indicate that while most institutions are offering some form of user education, certain elements of Yakel and Torres's concept of "archival knowledge" are not being widely offered in the online environment.

Headings:

Archives/Automation

Web sites/Evaluation

College and university archives

Computer-assisted instruction/Evaluation

AN ANALYSIS OF ONLINE USER EDUCATION RESOURCES IN ACADEMIC ARCHIVES

by
Valerie Gillispie

A Master's paper submitted to the faculty
of the School of Information and Library Science
of the University of North Carolina at Chapel Hill
in partial fulfillment of the requirements
for the degree of Master of Science in
Library Science.

Chapel Hill, North Carolina

November 2005

Approved by

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Deborah Barreau

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INTRODUCTION

The increasing availability of online finding aids has opened archives to people who traditionally never would have physically entered an archival repository. Through search engines, links from library catalogs, and databases like Archives USA, people are finding materials of interest that previously would have gone unnoticed. No longer are archives the domains of only "serious" academic researchers. Today, genealogists, undergraduates, and other non-traditional users often make up the majority of archival researchers.

The increase in non-traditional user populations has, in turn, increased the need for archival education and orientation. Traditionally, these functions have been performed in person, with guidance from a reference archivist, either individually or in a classroom environment. Currently, however, many people are using finding aids without actually visiting a repository, by accessing them online. Some of these online users have no familiarity with archival organization or description. Furthermore, even longtime visitors may not understand new technology, such as finding aids rendered in Encoded Archival Description. Both new and longtime users of archives may have difficulty interpreting or anticipating some of the rules and principles unique to archival institutions, such as restrictions on writing with ink while working with archival materials, or the concept behind closed stacks.

Clearly, there are some concepts unique to archives that are not taught through a library's typical bibliographic instruction or in the classroom within academic disciplines. In their 2003 article "AI: Archival Intelligence and User Expertise," Elizabeth Yakel and Deborah A. Torres outlined a new paradigm of user expertise, describing it as three

overlapping bodies of knowledge: domain (subject) knowledge, artifactual literacy, and archival intelligence. The authors wrote:

> Archival intelligence is a researcher's knowledge of archival principles, practices, and institutions, such as the reasons underlying archival rules and procedures, how to develop search strategies to explore research questions, and an understanding of the relationship between primary sources and their surrogates. Our contention is that a researcher's archival intelligence is separate from his or her domain or subject knowledge. Furthermore, we assert that archival intelligence is different from artifactual literacy, or the ability to interpret and analyze primary sources. While related to domain knowledge and artifactual literacy, archival intelligence refers to knowledge about the environment in which the search for primary sources is being conducted, in this case, the archives. (p. 52)

While subject knowledge and artifactual literacy are more properly taught within individual disciplines, educating users in archival intelligence is primarily the responsibility of archivists. Yakel and Torres suggest that archival intelligence contains three major components: archival theory, practice, and procedures; strategies for reducing uncertainty and ambiguity; and intellective skills (p. 53). The component of "archival theory, practice, and procedures" includes language and terminology understanding, conceptual understanding of the organization of archives, and understanding or "internalization" of rules. The authors also place the awareness of one's own knowledge about archives into this category. The second component, "strategies for reducing uncertainty and ambiguity," includes search tactics and strategies, and asking appropriate questions. The third component, "intellective skills," includes planning for a visit and making the connection between primary sources and their representations, such as catalog records and finding aids.

With the paradigm of archival intelligence in mind, research was conducted to investigate the current archival intelligence curriculum offered by archives and special

collections in research institutions. It was hoped that this research would provide an understanding of the range of user education resources currently being offered online, as well as reveal gaps in curricula based on the concept of archival intelligence. This study specifically examines vocabulary and terminology definition, guidance in search strategies, understanding primary source representation (the meanings and use of finding aids), and rules and regulations. Because this survey was conducted exclusively in the online environment, two aspects of Yakel and Torres's concept were not studied: the awareness of one's own knowledge about archives, and question asking.

In addition to studying the availability of resources in the "archival intelligence" model, this survey also examined the accessibility of these resources (how "deeply" they are embedded on a website), and whether archival user education resources are made available directly on parent library websites. The study was conducted by surveying the online user education offerings of a sample of special collections and archives within the Association of Research Libraries (ARL). These organizations were chosen because they tend to be large, academic libraries with well defined special collections departments.

As part of Yakel and Torres's concept of archival intelligence, the need for conceptual, non-repository specific user resources are emphasized. To determine whether such resources are available in this survey, it was noted whether the user education resources are specifically written to be applicable to the archival institution, or whether it is a more general education source. If there were a significant number of general sources, it would make it possible to do cross-institutional comparisons.

Through this survey of user education resources, the researcher hopes to uncover ways that archival repositories could improve their online user education offerings as part

of an overall program to increase archival intelligence in users. It may also reveal additional facets of the archival intelligence curriculum currently being offered. The purpose of this research is to address the question of whether archival intelligence is incorporated into the online archives user education resources available at major academic libraries.

BACKGROUND

Archival User Studies

In developing online user education resources, archivists must first consider the needs and desires of the user. A number of studies have been conducted about users of archives, mainly in the form of small surveys and interview-based studies. Several of these have focused on user interactions with archival finding aids. In one set of interviews conducted to learn more about user impressions of finding aids, the researcher found that some interviewees had difficulty with terminology: "A number of interviewees also commented on the strangeness of the term . . . If the term 'finding aid' is unclear, the ability to use finding aids effectively is also elusive." (Yakel, 2002, p. 117). In a more recent article, the same researcher discovered, "Subjects experienced difficulty in differentiating among related phrases such as abstract, scope and content note, and historical sketch. All of these words implied some type of content summarization to study participants" (Yakel, 2004, "Encoded," p. 75).

Another archivist named language as one of the areas that required extra care and consideration when used by archivists: "Language reflects both the explicit and tacit knowledge a community acquires in education and the workplace. Words and phrases

evolve in experience to become a shorthand technical jargon for larger concepts that members know but rarely articulate in full" (Craig, 2003, p. 97). It is this jargon that can inadvertently create a barrier between archivists and users.

Clearly, for some users finding aids have proved useful and understandable. A recent study of historians (a highly educated, traditional user group of archives) found that, "finding aids were not only used by historians but were highly valued. They were consulted for a number of reasons: to orient historians to new collections, to provide context and background information for their research areas, to reduce uncertainty when using a new archives or new collection, and to facilitate the identification of relevant documents" (Duff and Johnson, 2002, p. 493). This suggests that other users may also benefit from more fully understanding finding aids. The researchers also discovered that genealogists desired a broader understanding of the framework by which archives are organized, but tended to approach archivists only with questions about specific facts. The authors suggest that because genealogists search by topic but archivists organized by provenance, the possibility of confusion and searches with few results may occur. Given the evidence that researchers are reluctant to approach archivists with conceptual questions (Duff and Johnson, 2002), perhaps other methods of delivering conceptual information (such as online resources) would be useful.

In another study of genealogists, the researcher found that the majority of family researchers she examined were new to using finding aids. Many had found information about archival sources through online search engines, indicating that the increasing availability of finding aids will continue to bring in new users (Yakel, 2004, "Seeking").

Other researchers have emphasized the need for more user studies in general. Christopher Prom conducted a user survey, asking subjects to search for particular finding aids or items within finding aids. Although his study focused on search behaviors, he wrote, “Perhaps its [the study’s] most significant conclusion (in common with other user studies) is simply that a deeper understanding of users is needed.” (2004, p. 265). Many authors, including Yakel (2002) and Tibbo (2003), have suggested that archival repositories must place more emphasis on user education.

Online User Education

Online user education resources have been developed for a number of uses in research libraries. The University of Nebraska, Lincoln, developed an online curriculum designed to promote undergraduate information literacy (Hoffman, 2002). They noted that many undergraduates were unaware that their undergraduate library was much different from their high school library. The lack of differentiation from one library to another may have implications for archives and what sort of information their users need. The author of this case study emphasizes the need for user studies and ongoing evaluation of online resources.

Another study about online information literacy instruction focuses on a project at Virginia Tech University (Merrill, Sebak, & Erksine, 2005). This project featured modules that could be used separately or in conjunction with one another. The concept behind this online instruction was to allow students to learn principles and concepts, not merely “how-to” instructions. This concept is in keeping with the idea behind archival intelligence.

A different type of study, which analyzed “library skills” tutorials among ARL libraries, noted that although libraries had many different presentations, their content was frequently the same (Hrycaj, 2005). The author suggests that simply linking could be a more efficient use of time. If the content is not unique, then a unique tutorial is not necessary for each library.

A recent paper focused on a content analysis of online instruction in academic libraries (Barry, 2005). The researcher’s findings revealed that over 90% of the library websites in her sample used research guides, 60% used tutorials, 46% used “How Do I?” pages, and 40% used FAQs. These numbers indicate a fairly wide acceptance of specialized user education resources in academic libraries. In contrast, a survey of archives found that 87% featured research guides, 17% had FAQs, and 0% offered tutorials (Katte, 2002). This indicates that archival institutions may be slower to adopt online instruction formats. It may also be indicative of how much has changed in the online environment in the three years between these studies.

Archival User Education

As previously mentioned, archival user education is not a new development. Archivists have always attempted to educate their patrons, but it has traditionally been in person and often only by request of the patron. Many patrons do not receive intensive training and orientation. A study of National Archives patrons found that 90% of the researchers in their sample completed the orientation process in five minutes or less (Conway, 1994). Five minutes is probably not enough time to cover broad conceptual lessons on archival organization and description.

Rather than diminishing the role of reference archivists, the need for quality reference service has grown with the increased availability of finding aids. One researcher, studying user understanding of MARC records, indicates the need for consistent records in order to make user education effective (Malbin, 1998). With the adoption of *Archives, Personal Papers, and Manuscripts* (*APPM*) and later *Describing Archives: A Content Standard* (*DACS*), as well as the development of Encoded Archival Description, archival records are more consistent with a universally accepted standard of description, both within repositories and across institutions.

One archivist noted that because the internet draws in new users, archivists must do their best to encourage them to look closer, rather than scare them off with indecipherable terms (Craig, 2003). In addition, web access has generated new expectations from patrons about full text or images of documents. Patrons often do not understand the difference among primary sources, digitized images of primary sources, and descriptions (like finding aids) of primary sources, so clear explanation of what is and what is not available is desirable.

A study of archival institutions compared online education sources against the traditional elements of the reference interview (Katte, 2002). The researcher found that all of the elements of a traditional reference interview and orientation could be made available online, with the advantage that these elements would be available to patrons who cannot physically visit the repository. In an article about the challenges of serving online patrons, one author points out a critical difference in serving traditional and non-traditional users:

> Archivists have been trained to describe their holdings, but the needs of the lifelong learner/non-archive user community are creating a demand for the

> interpretation of materials which requires a different set of skills. The task of writing easy-to-read text for the world wide web and weaving a narrative around individual items is closer to writing text for exhibitions than it is to writing finding aids (Hill, 2004, p.142).

Writing a clear, understandable description of complex concepts can be a challenge, but the growth in both non-traditional and online users necessitates a simple, well-constructed style of online text.

Another challenge for both patrons and archivists is the significant difference between the organization of a library and the organization of an archive. Archival organization is reflected in finding aids "that follow the traditional hierarchical approaches of collections/record groups, series, files, and individual items that may confuse people at first if not explained" (Dearstyne, 1997, p. 192). The concept of organizing materials by provenance (as in archives) as opposed to subject (as in libraries) is the cause of frustration for users who have difficulty telling if they have found all relevant records on their topic.

As previously mentioned, Yakel and Torres (2003) argue that having an "archival" base of knowledge is separate from having an understanding of primary sources and subject knowledge. Their notion of "archival intelligence" goes beyond a single repository, and should be applicable in a variety of archival settings.

> Our findings indicate that for researchers to become expert users of archives and manuscript collections, basic conceptual knowledge and the development of a general framework of archival management, representation and descriptive practices, and search query formulation are necessary. *This contrasts with a model of archival user education that focuses on assisting researchers to use a specific repository for a particular project* (emphasis added, 54).

Rather than merely providing repository specific rules and search strategies, the authors emphasize the need for more general conceptual information, especially "in light of the

Internet and the increased amount of archival data (general information, representations, digitized collections) now available on-line with little or no human mediation" (p. 54).

Overall, the literature seems to point archivists toward creating a general curriculum about archival concepts and search strategies, appropriate for novice users, as well as for those accessing the institution remotely.

METHODOLOGY

The institutions in this study were selected from the 123 members of the Association of Research Libraries. This group was chosen because the member libraries tend to be large, academic libraries with well-defined special collections departments. Additionally, "the ARL organization represents a stable, well defined, nonarbitrary group of libraries that is large, but manageable" (Hrycaj, 2005, p. 214). Using a random number table, thirty institutions were selected (see Appendix 2). Only institutions attached to academic research institutions were surveyed; therefore, institutions such as the Library of Congress and the Canada Institute for Scientific and Technical Information were excluded. The survey was also limited to English-speaking institutions, which excluded Canadian institutions with French language websites.

Websites, rather than all possible modes of instruction, were selected for this study. Although many of the skills and knowledge that fall into the purview of archival intelligence are communicated in person, this study focused on online user education resources. Online resources were chosen for three reasons: to facilitate data collection; to see what is offered as an organized curriculum available to all users; and to see how pervasive online user education resources are. The type of study selected was content

analysis, a study of recorded human communications (Babbie, 2004). This research method requires creating a category system and making sampling decisions (Jones, 1996). The main risk is errors in reliability, which have been addressed in this study by creating clear categories, testing the methodology, and using an adequate sample.

The first issue examined was how many archival repositories an institution has. Many institutions have multiple archival repositories—for example, a manuscripts department and a university archives. Frequently, multiple repositories shared a single website, and information was simply collected from this collective resource. In cases in which an institution had multiple websites, the data were collected from what was determined to be the largest (in terms of holdings and use) of the manuscript repositories. In several cases, multiple repositories shared a website, but with only cursory information and links to the individual repositories. In this case, again, the largest manuscript repository was chosen for closer examination.

A data collection form (see Appendix 1) was designed to examine several aspects of online user education at the selected institutions. First, the relationship between the parent library and the special collections department was investigated. The search for the special collections library began on the parent library's webpage. Multiple links to special collections, when there was more than one, were noted and counted. After examining the special collections webpage and noting any user education items, the parent library's webpage was searched to see if it featured a direct link to the user education. This may indicate coordination of user education between parent and departmental libraries.

A second aspect recorded by the data collection sheet was information about the content of the special collections webpage. This included noting whether information about rules and policies was available and whether user education pieces took the form of a Frequently Asked Questions page, a tutorial, a research guide, or a general webpage. These categorizations were made based on each website's own description of its online user education materials. Frequently Asked Questions pages are always labeled as such and tutorial usually appears in the name of resources of that type. The category of "research guide" is a bit less defined, but for the purposes of this study, they were defined as resources that described themselves as research guides, or those designed to take the researcher consecutively through each step of the research process. Also recorded were the number of "clicks" necessary to reach the educational resource, as well as a narrative description of which links to click. This was noted to determine how "deeply" the user education resources were buried within the websites.

The third area examined in the data collection sheet was the content of the user education resource. If a resource described "how to use a finding aid," "how to search for topics," "how to research with primary sources," or defined archival terminology, these were noted. There was also an "other" category to note any other type of user education content found. Because of this study's interest in archival terminology, any time a word was defined, this definition was recorded.

As a test of the methodology, prior to conducting the study two data collection sheets were completed, and the researcher emailed staff at each repository to see if all of the online user education resources had been properly identified. Both repositories replied that the assessment of their resources was correct. Although this cannot guarantee that

every source was correctly identified at each of the thirty institutions, it does provide some verification for the data collection process.

In summary, between September 27 and October 2, 2005 sample libraries were visited by clicking on the main library links provided by ARL (http://www.arl.org/members.html). From there the main library webpage was investigated in search of a link (or links) to a special collections department. Once the special collections department was found, the proper repository's website was determined, and this website was examined using the data collection form. Having discovered the user education pieces available on the departmental website, the main library website was again explored to find any of the user education pieces on the main library website.

Because the internet undergoes constant change, the availability or lack of user education sources and links noted in this study may have changed since the original analysis. Also, as previously mentioned, because this study was conducted individually, it is also possible that some sources were overlooked. However, this survey provides a general understanding of the types of user education sources available at academic research institutions, if not an exhaustive study. It will determine what archival institutions are currently doing to instill Yakel and Torres's concept of "archival intelligence" in their patrons.

RESULTS

The results of this analysis present a mixed picture of the types and availability of user education sources. Some types of information are widely offered, while others are

only rarely found. Almost all institutions, however, are making an effort to provide some sort of online user education for their patrons.

Every institution in this survey had a special collections, manuscripts, or archives department that fit the parameters of this study. In addition, every one of these departments had some kind of web presence. As expected, not every institution had one main link to its archival repositories, although over three-quarters of them did.

Table 1: Types of Links from Main Libraries to Special Collections Libraries

	Single Link	Multiple Links	Single → Multiple
# of Institutions (n=30)	23 (77%)	4 (13%)	3 (10%)

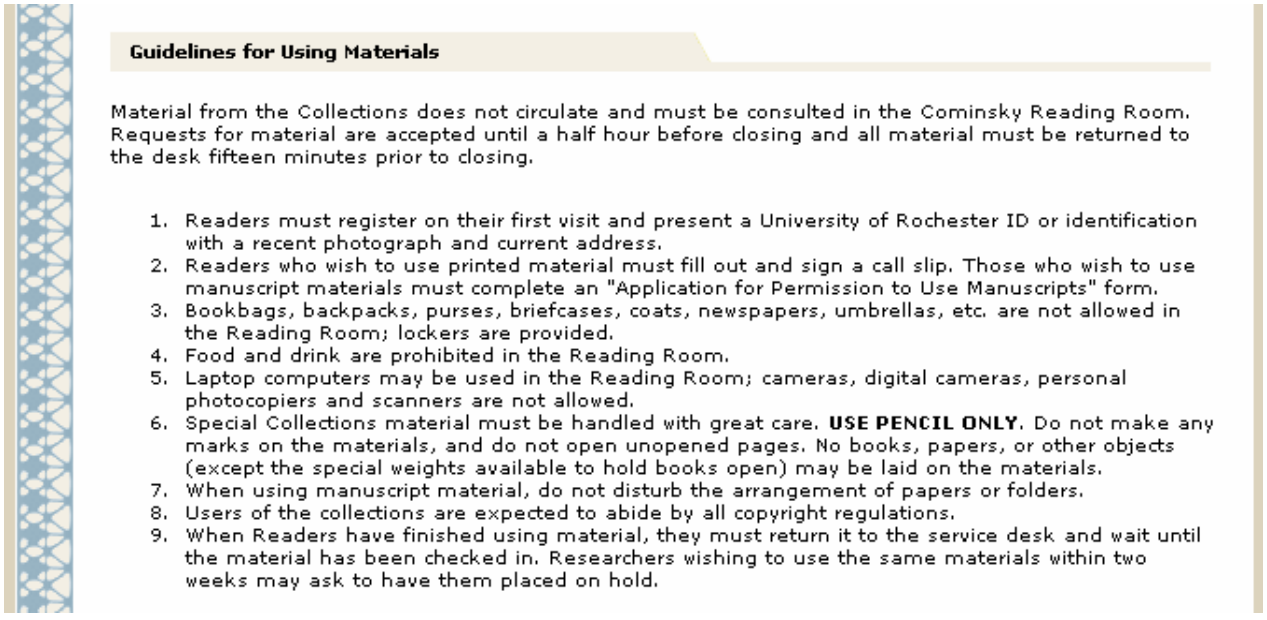
Twenty-three of the surveyed institutions had a single major link from their main library websites to their special collections as shown in Table 1. Four institutions had multiple links, ranging from 3 to 78; three had one main link that primarily directed users to choose from multiple links to select a more specific collection. One example of this "single to multiple" linking system is the University of Minnesota's Special Collections and Archives page (http://special.lib.umn.edu/), which is simply a portal to the eleven divisions of special collections and archives. Curiously, one institution (Princeton) had multiple links from its main library webpage, but in the course of investigation, a main link (or portal) was discovered. This main link was not referenced from the main library website.

Only one special collections library, at the Pennsylvania State University Libraries, had no user education information on its website, including no rules or

regulations. Although it did describe particular collections, and provided some information on duplication prices, there was no information specifically about how to use the collections. The other libraries in the sample had some form of online user education, although the types and extent varied widely.

One of the user education resources that most special collections provided is information about their rules and regulations. Twenty-four of the 30 surveyed institutions provided rules for the use of their collections. Examples of the types of rules and regulations provided include: information about registration; the process for requesting materials (sometimes with an explanation about why the stacks were closed); handling of the collections, including prohibitions on food, drink, pens, and outside materials; permissions required for use or duplication; days and times of availability; and other rules unique to the repository. Although the rules are similar in each institution, each of these resources is unique to each repository. An example of rules and regulations, from the University of Rochester, is found in Figure 1.

Figure 1: University of Rochester's Rules and Regulations (http://www.lib.rochester.edu/index.cfm?PAGE=1399)



Guidelines for Using Materials

Material from the Collections does not circulate and must be consulted in the Cominsky Reading Room. Requests for material are accepted until a half hour before closing and all material must be returned to the desk fifteen minutes prior to closing.

1. Readers must register on their first visit and present a University of Rochester ID or identification with a recent photograph and current address.
2. Readers who wish to use printed material must fill out and sign a call slip. Those who wish to use manuscript materials must complete an "Application for Permission to Use Manuscripts" form.
3. Bookbags, backpacks, purses, briefcases, coats, newspapers, umbrellas, etc. are not allowed in the Reading Room; lockers are provided.
4. Food and drink are prohibited in the Reading Room.
5. Laptop computers may be used in the Reading Room; cameras, digital cameras, personal photocopiers and scanners are not allowed.
6. Special Collections material must be handled with great care. **USE PENCIL ONLY**. Do not make any marks on the materials, and do not open unopened pages. No books, papers, or other objects (except the special weights available to hold books open) may be laid on the materials.
7. When using manuscript material, do not disturb the arrangement of papers or folders.
8. Users of the collections are expected to abide by all copyright regulations.
9. When Readers have finished using material, they must return it to the service desk and wait until the material has been checked in. Researchers wishing to use the same materials within two weeks may ask to have them placed on hold.

Relatively few special collections departments make use of specialized formats (FAQs, tutorials, or research guides) for their user education resources (see Table 2).

Table 2: Institutions Using Specialized, General, or No User Education Formats

	FAQ	Tutorial	Research Guide	Website	None
# of Institutions (n=30)	5 (17%)	2 (7%)	5 (17%)	24 (80%)	2 (6%)

Numbers do not equal 100%, as some institutions had multiple formats.

Five offered Frequently Asked Questions pages, two had tutorials, and four offered research guides. Only one institution, Yale University, had more than one specialized resource. However, most of the special collections departments did have web pages with user education content on them. Out of the 30 sampled, 24 had a webpage with user education, and many of the places with specialized user education also used more general web pages to deliver other kinds of content. It should be noted that information about rules and regulations was noted separately from other kinds of user education, and five of the six places with no information on rules did have other forms of user education.

In terms of content, most of the special collections libraries had information on how to search for topics at their library, but other archival intelligence topics were less well covered. Table 2 illustrates the coverage of archival intelligence by the sites in the study.

Table 3: Archival Intelligence Topics Addressed By User Education Resources

	How to search	How to use a finding aid	Research with primary sources	Terminology	None of these
# of Institutions (n=28)	19 (63%)	2 (7%)	4 (13%)	12 (40%)	6 (20%)

Numbers do not equal 100%, as some institutions had multiple formats.

Of the 28 libraries with user education resources (besides rules and regulations), 19 had searching for topics as one of its subjects. Only two institutions, however, had information about how to use a finding aid. Although a number of libraries defined the word "finding aid" and some of its component parts, there was little information about how one would actually look through a finding aid to find a particular topic or item. Likewise, only four institutions discussed the implications of research with primary sources (such as defining the term, offering examples of how such materials would be used).

Twelve special collections libraries had a definition of one or more terms of archival terminology (see Appendix 3). Nine of the institutions defined the term "finding aids," one defined "online registers" (which it described as also being known as "finding aids"), and one defined a "fonds." One did not define finding aids, but did define "manuscripts and archives" and "primary sources." Terminology was generally defined in one or two sentences, although some definitions encompassed multiple paragraphs with other definitions embedded within it. It should be noted that these definitions appeared in a variety of user education formats. Most frequently, the definitions appeared

within paragraphs as part of an overall narrative on a user education resource webpage. None of the institutions used exactly the same definition for any term.

Other topics included in user education resources included duplication, request forms, reproduction and publication, copyright information, types of materials contained in a collection, and orientation and visiting information. Brown University, for example, offers a "Virtual Orientation for First-Time Users" (http://www.brown.edu/Facilities/University_Library/libs/hay/firsttime.htm). It includes information not only about the intellectual process of registering as a patron and requesting materials, but also the physical set-up of the building (for example, "On the counter to your left is the Reading Room Register. Please sign in and out."). This type of guide offers a full overview of the experience of actually visiting that particular institution.

The "depth" at which user education resources were located varied between one and four layers, meaning that it took between one and four clicks to arrive at the resource. The majority of resources were one or two clicks from the special collections home page. Often, when an institution had multiple resources, one resource would "lead" to another resource.

Nearly all of the user education resources were specific to the individual repository: 27 of the 28 institutions with user education resources had repository-specific resources. The only exception was a research guide for genealogists at Auburn University. In all other cases, specific examples, rules, orientation, and topic searching uniquely related to the repository were used, although some of the information provided could be used in other contexts. Perhaps related to the specificity of the user education

resources was the fact that most of the main libraries did not link to the user education resources (22 of the 28 with user education resources).

DISCUSSION

In analyzing these results, it is useful to break the discussion down into the three main components of archival intelligence: archival theory, practice and procedures; strategies for reducing uncertainty and ambiguity; and intellective skills.

Archival Theory, Practice, and Procedures.

As previously discussed, the component of "archival theory, practice, and procedures" includes language and terminology understanding, conceptual understanding of the organization of archives, and understanding or "internalization" of rules.

The issue of terminology is a difficult one. Because the definitions did not, as a rule, appear on pages dedicated to defining archival terminology, there was wide variance in where the terms were found and how extensively they were defined. In some cases, the definitions were offered within sentences or were described in multiple paragraphs. While both of these styles are useful and acceptable, neither offers the sort of quickly understandable and easily discovered definition that novice users may need. The recently published *Glossary of Archival and Records Terminology* may be a useful guide in designing online terminology definitions, as it is a peer-reviewed glossary. However, it is primarily intended for archival professionals, so some definitions may not be appropriate for a novice user.

Within the user education resources, finding aids were described as “descriptive tools,” “descriptive guides,” and “guides to information,” to name just a few. All of these definitions are correct, yet none provide a visual demonstration of the term. One innovative idea used by Georgia Tech (not a surveyed institution) is a sample finding aid that allows the user to highlight various areas and click on the highlighted section, revealing definitions of the terminology within each section (http://www.library.gatech.edu/archives/tutorial/findingaids.html#). This technique takes advantage of the online environment and the ability to use hyperlinks. It simultaneously presents the information in visual and textual way, assisting those who may not understand the meaning of archival terminology out of context.

An underlying issue, however, is that the majority of institutions did not define any archival terminology, yet featured finding aids and other descriptive tools that employed these words. As previous research has shown, users seem to have difficulty defining and understanding terms that archivists use frequently.

Whether the institutions offered educational tools for a conceptual understanding of archives is somewhat difficult to determine. Certainly, some of the definitions help sketch out the parameters of archival organization—after all, finding aids are the textual description of the physical arrangement of collections and incorporate conceptual elements such as provenance and original order. An overall education in archival concepts would likely require either a series of web pages or a tutorial, which would allow various concepts to be presented and then to be integrated into a broad overview of archival arrangement.

A major element of being able to grasp archival concepts is the internalization of rules and understanding of rules specific to each repository. One striking finding was the availability of rules and regulations at nearly all of the repositories, compared with a relative lack of information about terminology, how to use a finding aid, and primary source use. In their interviews with researchers, Yakel and Torres discovered that "Rule acquisition was important and appeared to be a piece of the puzzle of archival intelligence. Rules need to become a part of the background in order for expertise to emerge" (2004, p. 66). The availability of rules is certainly a boon to the novice researcher. One wonders, however, what message users get when they are confronted with a long list of rules and few other forms of assistance?

Strategies for Reducing Uncertainty and Ambiguity

The second component, "strategies for reducing uncertainty and ambiguity," includes search tactics and strategies. The fact that nearly two-thirds of the institutions studied had a user education resource devoted to helping patrons search is a positive finding. It suggests that archivists are thinking about the ways that users approach their collections, and the multiple ways that descriptive tools can be employed.

The same cannot be said for finding aids, for which very little instruction was offered. As previous studies have shown, many people are not sure what a finding aid is. Therefore, one would expect more assistance on archival websites, both defining the term and offering examples of how to use these guides. The existence of terminology definition is useful, but without a more robust demonstration of how a finding aid is used

(such as with the Georgia Tech example), patrons may have difficulty actually using the finding aid, even if they understand what it is.

One somewhat surprising result was the much lower evidence of research guides than noted in Katte's 2002 study. In her survey, she found that almost 90% of institutions had research guides, but this survey noted them in only 17% of institutions. This disparity is probably due to the use of a more restrictive definition of "research guide" in this study. Most institutions did provide descriptions of their collections, usually in a paragraph form with biographical or historical information and a summary of the collection's contents. If these had been counted as research guides, the percentage of institutions using them would be more in line with Katte's study. However, because this survey was concerned with a specific form of user education, a much lower percentage of institutions fit the parameters of research guide used in this study, which required the resources to have step-by-step information.

Intellective Skills

The third component, "intellective skills," includes planning for a visit and making the connection between primary sources and their representations, such as catalog records and finding aids. Several institutions offered information about how to plan for a visit and what to anticipate during a visit. For example, Emory University lists items that researchers will need when visiting (http://marbl.library.emory.edu/Research/using-materials.html). The University of Washington describes the process of registering and checking one's belongings (http://www.lib.washington.edu/specialcoll/general/use.html). In both of these examples, the libraries present their orientation as part of their list of

rules and regulations. As previously mentioned, Brown University presents their orientation information as a narrative description (http://www.brown.edu/Facilities/University_Library/libs/hay/firsttime.htm) in what may be perceived as a friendlier and more casual tone. Both styles of presentation assist users in planning for a visit and help them become more effective researchers.

The second intellective skill, understanding primary sources and their representations, overlaps heavily with discussion of terminology and search strategies. However, the fact that almost none of the institutions defined a primary source and few described how to use a finding aid may mean that patrons are not getting an explicit education on how primary sources and their representations interact.

Although most of the websites omitted information about how to use a finding aid or how to do research with primary sources, this did not necessarily mean that no information was available. For example in some of the rules and regulations offered by special collections libraries, they included information about the special nature of primary source materials and the need for proper handling. However, this primary source information is not labeled as such, making it fairly inaccessible for someone looking specifically for primary source information.

Although the three major divisions of archival intelligence could certainly be detected in this analysis, the elements generally did not appear separately. More frequently, archival theories, practices and procedures, strategies for reducing uncertainty and ambiguity, and intellective skills were presented in combination with one another. Perhaps the strongest resources were the ones that offered education in all three of the areas, providing a more holistic understanding of archival intelligence.

Other Issues

Several other issues were noted during the study and deserve comment. The issue of repository-specific resources appears to dovetail with the availability of these resources on parent libraries' websites. When the resources are specific to a particular library, the main library seems to be less likely to link the resource on its main website. Perhaps this is because the research assistance on the main websites tends to be general, bibliographic instruction as part of an overall goal of information literacy. It is conceivable that if online user education resources in archives were more general and less repository-specific, more of them would be appropriate for placement on parent library websites.

A second issue is the finding that the depth at which resources were located on special collections web pages tended to be one or two clicks away. In rare occasions, three or four clicks were necessary to find the user education resource. While the evidence of this study shows that these resources are generally readily available, it is worth noting that some institutions made finding their resources more difficult by requiring several pages to click "through" to find the user education resource.

In conclusion, the archival repositories in this study are making important steps toward providing online user education resources. However, there are many areas in which the curriculum could be more complete. The "archival intelligence" concept is useful in assessing what an institution is currently providing, and what areas it should include in future online user education resources.

FURTHER RESEARCH

This preliminary survey raises a number of issues that need further study. One of these issues has been raised many times before in the literature: more research must be conducted with users to better understand their needs. If we knew how people used finding aids, what types of materials they are seeking, how many of them have experience working in archives, and what terminology and procedures they do and do not understand, archivists would better be able to design online assistance.

More information about the design of these web resources is also needed, an aspect that was entirely ignored in this study. The style and design of the websites in the sample libraries was wide ranging, and a number of terms were used to describe the contents. User studies about how people navigate the pages and understand the terminology would be useful.

The issue of terminology confusion has been mentioned several times in the literature, but clear, readily available definitions remain elusive. Many of the libraries in this sample were expressing the same information (including terminology) in many different ways. Unlike resources for general information literacy, which are nearly identical in terms of content (Hrycaj 2005), archival resources tend to vary in the details but do, in fact, share conceptual information.

Perhaps a useful and time-saving step would be for archivists to develop a basic archival tutorial that could be used in multiple repositories, and tailored for an individual repository's needs. This could be done as a collaborative project among a group of interested archivists, and then shared through an organization such as the Society of American Archivists.

A collaborative approach would maximize the wealth of experience that archivists have with user education. By sharing the responsibility for developing a well-crafted, complete source of archival education in the archival intelligence model, archivists could create a standard curriculum to share with their ever-growing, ever-changing population of users. This curriculum could also be made available to smaller institutions that otherwise would not have considered offering user education resources. The more standardized the archival curriculum becomes, the better equipped users will be to find relevant materials in multiple archival repositories.

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APPENDIX 1: Data Collection Sheet

Data Collection Worksheet

Institution: _____ Date: _____

Does this institution have more than one main link from its main library website to the archives and special collections websites? ___yes ___no

If no, list the URL of the archival website:

If yes, how many separate websites does it have for archives or manuscript collections? ____

List the names of these sites and the URLs:

Is there any information on rules or policies (excluding duplication)? ___yes ___no
List the URL:

What kind of educational resources are available *specifically related* to conducting archival research (finding collections, using finding aids, how to do research with primary sources)?

___FAQ ___Tutorial ___ Research Guide ___Other (specify):

List the names and URLs:

Is this resource linked from the special collections/archives page? ___yes ___no

Is this resource linked from the Main Library Page? ___yes ___no

How many clicks does it take to get there? Count from the special collections/archives webpage to the educational resource.

What is the process for getting to it? (specific names of links)

What issues does this resource address (check all that apply):

___ how to search for topics ___how to use a finding aid ___research with primary sources

___archival terminology. Which, if any, words does it define? List the words and copy the definition here.

___other issues (specify)

Is this resource specific to the archival repository at this institution?

APPENDIX 2: Institutions Surveyed

Institution	Main Library Website (from http://www.arl.org/members.html)
Arizona State University	http://www.asu.edu/lib/
Auburn University	http://www.lib.auburn.edu/
Boston College	http://www.bc.edu/libraries/
Brown University	http://www.brown.edu/Facilities/University_Library/
University of California – Los Angeles	http://www.library.ucla.edu/
University of California – Santa Barbara	http://www.library.ucsb.edu/
Duke University	http://www.lib.duke.edu/
Emory University	http://www.emory.edu/LIBRARIES/
University of Florida	http://www.uflib.ufl.edu/
Georgetown University	http://gulib.lausun.georgetown.edu/
Harvard University	http://lib.harvard.edu/
University of Illinois – Chicago	http://www.uic.edu/depts/lib/
University of Kansas	http://www.lib.ku.edu/
University of Kentucky	http://www.uky.edu/Libraries/
University of Manitoba	http://www.umanitoba.ca/libraries/
University of Minnesota	http://www.lib.umn.edu/
University of Nebraska – Lincoln	http://iris.unl.edu/
University of New Mexico	http://www.unm.edu/libraries.html
Oklahoma State University	http://www.library.okstate.edu/
Pennsylvania State University	http://www.libraries.psu.edu/
Princeton University	http://libweb.princeton.edu/
Queen's University	http://stauffer.queensu.ca/
Rice University	http://www.rice.edu/fondren/
University of Rochester	http://www.lib.rochester.edu/
Rutgers University	http://www.libraries.rutgers.edu/
State University of New York – Albany	http://library.albany.edu/
Texas A&M University	http://library.tamu.edu/
University of Washington	http://www.lib.washington.edu/
Washington University – St. Louis	http://library.wustl.edu/
Yale University	http://www.library.yale.edu/

APPENDIX 3: Definitions of Archival Terminology

Institution	**Term**	**Definition**
Boston College	Finding aid	A finding aid is a descriptive tool used by archivists to establish physical and intellectual control over a set of archival materials. Finding aids usually consist of several parts, including a biographical or historical sketch, a scope and contents note, information on how the collection of materials is organized, restrictions, index terms, administrative information, and a detailed box and folder listing.
Duke University	Finding aid	Finding Aids are descriptive tools which serve as the primary point of access to archival collections in archives and manuscript repositories.
University of Florida	Finding aid	Finding aids are descriptive tools such as guides, inventories, or catalogs, which are used to describe archival records and manuscript collections. Typically, a finding aid provides information about the creator, origin, scope, content, format, date range, and arrangement of the papers or records. Often, the finding aid includes a detailed container list that provides information about the folders or items in the collection. Most collections are described at the folder level, rather than at the item level. In addition to the container list, other common elements of the finding aid include:
	Collection Information	• **Collection Information** - Title of the collection, date span, and name of the person, family, or organization responsible for the creation of the papers or records. Also, the extent of the collection is provided as a container count or as a measurement of linear/cubic feet.
	Biographical/ Historical Note	• **Biographical/Historical Note** - Biographical summary or organizational history, written as a narrative statement and/or a chronological listing, which establishes a context for the papers or records.
	Scope and Content Note	• **Scope and Content Note** - A description of the collection, detailing its content, formats, and use. Generally, this note includes the most significant persons, organizations, events, and subjects represented by the collection.
	Administrative Information	• **Administrative Information** - Information about how the collection was acquired, how it was processed and by whom, the arrangement

	Series Descriptions	of the material, and any access or use restrictions. • **Series Descriptions** - Some collections are organized into discrete sections according to function or format of the records (such as Outgoing Correspondence, News Clippings, or Meeting Minutes). These discrete sections, or series, often have their own scope and content notes describing the contents. It should be noted, however, that finding aids come in numerous shapes and sizes. Just as no two collections are exactly the same, finding aids rarely share all of the same components. Larger collections, for example, often have series descriptions and container lists, while small collections may not require any description beyond the Scope and Content Note.
Harvard University	.Finding aid	A steadily increasing number of Houghton's finding aids for manuscript collections now appear in OASIS (Online Archival Search Information System). These are descriptive listings of the contents of collections, written in EAD (Encoded Archival Description) and mounted on the Web.
University of Manitoba	Fonds	A fonds is all material created or collected by an individual, family or organisation in the course of normal daily activity that is considered permenantly valuable based on its historical, fiscal, legal or adminsitrative value.
University of Minnesota	Finding aid	Finding aids are descriptive guides or inventories that have been created by the archivist to provide information about the contents of the collections.
University of Nebraska-Lincoln	Finding aid	Finding Aids assist in access to collections held in the department and serve as a guide to information about collections. The finding aids include size of the collection, dates of the materials, biographical or historical information, details on the contents of a collection, and a container list that identifies materials located in boxes and folders.
Princeton University	Finding aid	Material in Special Collections can also be described at many levels at once, thanks to a powerful tool known as a finding aid. Finding aids, many of which are now available online, are multi-page documents that function as road maps, guiding researchers to the part or parts of a collection most likely to answer their questions. Finding aids such as the guide to the F. Scott Fitzgerald Papers describe collections as a whole, then

		break them into series and, sometimes, subseries based on the form, including genre and format, or content of the material in the collection. In the Fitzgerald Papers, for example, correspondence is separated from the author's literary works, and clippings from scrapbooks. Finding aids conclude with a comprehensive list of the boxes and folders within each series or subseries, allowing researchers to focus their search. In some collections, the items within each folder are individually described. Many finding aids also contain a short biography of a collection's creator or a corporate history if the creator is an organization. This is very helpful in contextualizing the material in a collection. It is important to bear in mind that apart from artificial collections, which draw their contents from many sources, collections are centered around an individual or organization - the creator - and are preserved as indivisible wholes based on their origin or, in archival parlance, provenance. Thus, while two collections may contain information on World War I, this information is not extracted and grouped together under this subject. To do so would be to fragment and, thus, distort the life of the individual or organization that collections such as the Fitzgerald Papers are designed to preserve.
Rice University	Finding aid	Detailed information about individual manuscript and archives collections is provided by a finding aid. Each finding aid describes: • the person or organization focused on by the collection • dates covered by the collection • subjects covered by the material • formats found in the collection (such as photographs, correspondence, diaries) • contents of the collection, listed by box and folder or by individual item Use the finding aid to help you determine if the collection meets your research needs. You may request materials from collections by specifying the box and folders you would like to view.
University of Rochester	On-line registers	(also called "finding aids"). The register contains a short essay about the collection and a box-by-box or folder-by-folder listing of its contents.”

Texas A&M	Finding aid	The site consists of the collection descriptions or "finding aids" that archives, libraries, and museums create to assist users in locating information in their collections. Consider these an extended table of contents which describe unique materials only available at the individual repositories.
Yale University	Manuscripts and archives	Unique documents, either hand-written or typed, varying in length from a single note or letter to a full-length book, and small groups of the same. Manuscripts & Archives may be either personal papers or institutional archives. During this century the definition of manuscript, which originally referred to handwritten items, has evolved; it refers now to "... a body of records or personal papers or an artificial collection with historical value held by an institution or individual other than the creator." (Trudy Huskamp Peterson, "Using the finding aids to archive and manuscript collections," **IN** *Teaching bibliographic skill in history: a sourcebook for historians and librarians* , ed. Charles A. D'Aniello (New York: Greenwood Press, 1993), p.267). "In archives, [the term] *manuscripts* is used to distinguish nonarchival from archival material; it includes groups of personal papers and artificial collections." (*ALA glossary of library and information science* (Chicago: American Library Association, 1983), p.139.
	Primary sources	original unpublished material